LIVYY, G.V.; GAL'PEROVICH, M.G.; VASILYUK, N.Z.; SOPRIKO, A.Ye.;
KAZARINA, N.I.; CHURINA, V.I.; GIL'MAN, B.A.; YEGOROV, K.A.;
GONCHAR, Ye.G.

Method of refining the skin side of fur articles made with low grade peltry; Soviet Certificate of Inventions No.147290. Kozh.-obuv.prom. 4 no.8:43 Ag '62. (MIRA 15:8)
(Fur industry—Technological innovations)

GONCHAR, Ye.S.; SOKOLOVSKAYA, O.G.

We are improving long-distance through call service. Vest. sviazi 24 no. 1:16 Ja '64. (MIRA 17:5)

1. Starshiy inzh. ekspluatatsionno-tekhnicheskogo otdela Kiyevskogo mezhdugorodnoy telefonnoy stantsii (for Gonchar).
2. Nachal'nik planovo-finansovogo otdela Kiyevskoy mexhdugorodnoy telefonnoy stantsii (for Sokolovskaya).

FILONENKO, S.N.; GONCHAR, Yu.N.

Simple measurement of the tangential component of the cutting force.
Stan. i instr. 31 no.9:37 S '60. (MIRA 13:9)
(Metal cutting)

FILONENKO, S.N.; GONCHAR, Yu.N.

Relationship between the tangential cutting force and the diameter of machining. Stan.i instr. 33 no.7:30-31 Jl '62. (MIRA 15:7)
(Metal cutting)

FILONENKO, S.N.; GONCHAR, Yu.N.

Force ratio in machining capron parts. Nauch.zap.Od.politekh.inst. 26:73-75 '60. (MIRA 15:5)
(Plastics machining)

GONCHAK, Yu. V.

21 (7), 21 (8)

AUTHOR:	Rudakov, V. P.	SOV/89-7-1-18/26
TITLE:	IX All-Union Conference on Nuclear Spectroscopy (IX Vsesoyuznoye soveshchaniye po yadernoy spektroskopii)	
PERIODICAL:	Atomnaya energiya, 1959, Vol 7, Nr 1, pp 76-78 (USSR)	

ABSTRACT: The IX All-Union Conference was held from January 26 to February 2, 1959 at Khar'kov. More than 300 participants heard 100 lectures, the most important of which dealt with the following fields. Nuclear Theory. General problems of β-decay. A. S. Davydov (MGU): Theoretical classification of low-energy excited nuclear states. L. K. Peker: Deformed nuclei. B. L. Birbrair, L. K. Peker, L. A. Sliv (LFTI): Quadrupole oscillations of deformed nuclei. Ye. V. Inopin, V. Yu. Gonchar, S. P. Tsytko (KhFTI): Calculation of the ft-values with matrix elements for β-transitions by means of the generalized nuclear model. S. T. Belyayev (IAE): Consideration of pair-correlation in nuclei. A. B. [illegible] (IAE): The application of the superconductivity model to nuclei for the purpose of calculating their moments of inertia. P. E. Nemirovskiy (IAE): Problems of the neutron stability of nuclei. [illegible] (IAE): The present stage in the theory of β-decay. V. V. Vladimirskiy, V. K. Grigor'yev, V. A. Yergakov, Yu. V. Trebukhovskiy (ITEF): Measurement of the angular correlation between electron and neutrino in the decay of the neutron. V. M. Lobashev, V. A. Nazarenko, L. I. Rusinov (LFTI): Measurement of the correlation between the transversal electron polarization and circular polarization of γ-quanta occurring in the decay of Sc^{46} and Co^{60}. Decay Schemes. γ-radiation of Nuclei. [illegible] Anufriyev, A. K. Val'ter, Yu. V. Gonchar, Ye. I. Kopanets, A. N. L'vov, P. M. Tutakin, S. P. Tsytko, P. V. Sorokin, A. S. Deyneko, I. Ya. Malakhov, A. Ya. [illegible] (Fiziko-tekhnicheskiy Khar'kovskiy institut (Physico-technical Institute, Khar'kov)): The $Si^{28,29,30}(p,\gamma)$, $Ne^{20}(p,\gamma)$, $S^{32-34}(p,\gamma)$, $Ar^{40}(p,\gamma)$ and $N^{14}(p,\gamma)$ reactions. D. G. Alkhazov, A. P. Grinberg, G. M. Gusinskiy, I. Kh. Lemberg, V. V. Rozhdestvenskiy, K. M. Yerokhina of the Leningradskiy fiziko-tekhnicheskiy institut (Leningrad Physico-technical Institute): Investigation of the Coulomb excitation of the lower levels of some nuclei during their bombardment by multiply charged ions (C, N, O, and Ne). A. V. Kalyamin, A. N. Murin, B. K. Pokrovskiy, V. A. Yakovlev (RIAN): New isotopes Tu^{161}, Ho^{153}, Ho^{155} and Ho^{157}. B. S. Dzhelepov, V. A. Sergiyenko (LGU): Decay schemes of some neutron-deficient isotopes, set up on the basis of measurements of the coincidence of the internal conversion electrons. Spectroscopy Engineering. B. S. Dzhelepov, R. B. Ivanov, V. G. Nedovesov, V. G. Chumin (RIAN): α-spectrometer with double focusing. S. A. Baranov, V. V. [illegible], A. G. Zelenkov, A. F. Malov, V. Ya. Shcherkin (IAE): Improved α-spectrometer. [illegible] Parchuk, O. V. Belyak, V. I. Golyshkin, V. A. [illegible] (IFAN UkrSSR): Magnetic spectrograph for heavy charged particles. The representatives of the Ministerstvo radiotekhnicheskoy promyshlennosti (Ministry of the Radio-engineering Industry) gave a report about new multipliers. The Conference was closed by B. S. Dzhelepov, who stressed the fact that nuclear tables and reference works ought to be published much more quickly in order to be of real use to the experimenter.

Card 1/3

Card 3/3

51

GONCHARENKO, A.

"With Soviet Aeronauts," Krasnaya Zvezda, No.279, p. 1, 25 Nov 1954.

Translation of article D 418836

Name : GONCHARENKO, A.

Remarks : A. Goncharenko is the author of an article entitled "Station Receives Sputnik Signals", which describes the operations of a tracking station for artificial satellites located between Moskva and Simferopol'.

Source : N: Krasnaya Zvezda, No. 238, 8 October 1957, p. 1, c. 4-6

[redacted]

Records for equipment in construction work. Bukhg.uchet 14
no.5:33-34 My '57. (MIRA 10:7)

1. Glavnyy bukhgalter zavoda "Zaporozhstal'" (g.Zaporozh'ye).
(Construction industry--Accounting)

GONCHARENKO, A.

The "A-2" is working. IUn. tekh..3 no.8:15-17 Ag '59.
(MIRA 12:12)

(Coal mining machinery)

PADALKO, V., inzh.-mayor; GONCHARENKO, A., starshiy inzh.-leytenant

River barges form a floating bridge. Tyl i snab. Sov. Voor. Sil 21 no.10:74-75 O '61. (MIRA 15:1)
(Pontoon-bridges)

GONCHARENKO, A.

Introducing new equipment. Mias.ind.SSSR 33 no.2:24 '62.
(MIRA 15:5)

1. Orshanskiy myasokombinat.
(Canning industry—Equipment and supplies)

RAYKHLIN, F.I., kandidat tekhnicheskikh nauk; GONCHARENKO, A.A.

Improved finish for dress worsteds. Tekst.prom.15 no.9:21-22 S'55. (MLRA 8:11)

1. Glavnyy inzhener Rostokinskoy fabriki (for Goncharenko) (Woolen and worsted manufacture) (Textile finishing)

LAVRINENKO, M.Z.; GONCHARENKO, A.A.; KHOLOSHA, V.I.

Effect of certain technological factors on the durability of drill rods. Gor. zhur. no. 12:72-73 D '65. (MIRA 18:12)

1. Rudoremontnyy zavod tresta Leninruda (for Lavrinenko).
2. Dnepropetrovskiy gornyy institut (for Goncharenko, Kholosha).

GONCHARENKO, A.B.

25776

Reorganizatsiya sistemy remontnych rabot na sakharnykn zappdakh. Sakhar. prom-st', 1949, No7 - 4-5.

SO: Letopis' No. 34

GONCHARENKO, A.D.

AID P - 590

Subject : USSR/Engineering

Card 1/1 Pub. 93 - 5/11

Author : Goncharenko, A. D.

Title : Master form for cornice drawing along a guiding lath

Periodical : Sbor. mat. o nov. tekh. v stroi., 8, 11-12, 1954

Abstract : A new master form for cornice drawing is suggested whereby only one guiding lath along the wall is necessary instead of the customary two (the other on the ceiling). Diagram.

Institution: None

Submitted : No date

GONCHARENKO, A. D.

NIKOLAYEV, L.A., kandidat tekhnicheskikh nauk; GONCHARENKO, A.D.

Pneumatic starting devices used in ZIL-151 automobiles. Avt.i trakt. prom. no.4:14-16 Ap '57. (MLRA 10:5)
(Automobiles--Starting devices)

GONCHARENKO, A.K., inzh.; DANILENKO, Ye.K., inzh.

Seminar on the exchange of practices in designing irrigation and drainage pumping stations. Gidr. i mel. 15 no.4:63-64 Ap '63.
(MIRA 16:5)

(Pumping stations)

GONCHARENKO, A.M.

Polarization of homogeneous electromagnetic waves in absorbing crystals of lower crystal systems. Dokl. AN BSSR 2 no.11:457-460 D '58. (MIRA 12:8)

1. Predstavleno akademikom AN BSSR B.I. Stepanovym.
(Polarization (Light))

SOV/70-3-5-9/24

AUTHORS: Goncharenko, A.M. and Fedorov, F.I.

TITLE: The Surfaces of Refraction and Absorption in Absorbing Crystals (Poverkhnosti refraktsii i absorbtsii pogloshchayushchikh kristallov)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 5, pp 587-592 (USSR)

ABSTRACT: A theoretical analysis is made of some of the properties of the surfaces representing the refractive index and absorption in absorbing crystals. Only the propagation of uniform waves is considered where wave and amplitude normals are parallel. The refractive index surface is defined by a radius vector $\underline{r}_1$ of length proportional to the r.i. n_1 for the wave normal direction $\underline{n}$. Hence, $\underline{r}_1 = n_1 \underline{n}$ and n_1 is the real part of the r.i., $n = n_1 - in_2$, n_2 being the absorption coefficient. The absorption surface is defined by $\underline{r}_2 = n_2 \underline{n}$. The task is to describe these two surfaces as functions of the wave normal $\underline{n}$.

The coefficients in the expression:

Card 1/3

SOV/70-3-5-9/24

The Surfaces of Refraction and Absorption in Absorbing Crystals

$$n_{\pm}^{-2} = a + b\,[\underline{nc'}][nc''] \pm b\left([\underline{nc'}]^2\,[nc'']^2\right)^{1/2}$$

have to be found. The parameters come from the reciprocal complex tensor for the dielectric susceptibility:

$$\varepsilon'^{-1} = a + b(c'.c'' + \underline{c}''.c') .$$

A graphical method for finding the directions of the extrema in principal sections of both the r.i. and the absorption surfaces is explained. Explicit values for the parameters in the above equation are given in terms of the real and imaginary parts of the r.i. and the directions are given. There are 2 figures and 4 references, 3 of which are Soviet and 1 German.

Card 2/3

SOV/70-3-5-9/24

The Surfaces of Refraction and Absorption in Absorbing Crystals

ASSOCIATION: Institut fiziki i matematiki AN BSSR (Institute of Physics and Mathematics of the Ac.Sc. Belorussian SSR)

SUBMITTED: March 17, 1958

Card 3/3

AUTHOR: Goncharenko, A.M. SOV/70-4-3-17/32

TITLE: The Refraction and Absorption Surfaces of Absorbing Crystals of Monoclinic and Triclinic Symmetry

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 3, pp 393-398 (USSR)

ABSTRACT: Crystals of higher symmetry systems have been studied earlier (the author and F.I. Fedorov - Ref 1). Earlier authors, such as Drude, Pockels, Berek and Szivessy, either treated the question only approximately or used complex co-ordinates. The treatment is mathematical and, for the monoclinic case, is illustrated with refraction and absorption surfaces calculated for a crystal with R.I. for first wave = 2.5. absorption coefficient = 1.0 ($a = 0.1 + i\ 0.095$), [$b = 0.02\ (1 - i)$] . Similar values are taken for the triclinic case. A particular case of a uniaxial triclinic crystal is taken and shown to be distinguishable from monoclinic uniaxial crystals and crystals of moderate symmetries. In the plane in which the optic axis lies there is also no likeness to monoclinic or moderate-symmetry uniaxial crystals. The formulae developed permit the calculation of the curves

Card1/2

SOV/70-4-3-17/32

The Refraction and Absorption Surfaces of Absorbing Crystals of Monoclinic and Triclinic Symmetry

of refractive index and absorption obtaining for any section of the refraction and absorption surfaces of monoclinic and triclinic crystals. Acknowledgments are made to Professor F.I. Fedorov, author of "The Optics of Anisotropic Media", Minsk, 1958.
There are 5 figures and 6 references, 2 of which are Soviet and 4 German.

ASSOCIATION: Institut fiziki i matematiki AN BSSR (Institute of Physics and Mathematics of the Ac.Sc., Belorussian SSR)

SUBMITTED: October 18, 1958

Card 2/2

24.7100, 24.3000

75995
SOV/70-4-5-17/36

AUTHOR: Goncharenko, A. M.

TITLE: Concerning Some Peculiarities in the Behavior of Refraction Indices and Absorption Coefficients of Opaque Crystals

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 5, pp 727-731 (USSR)

ABSTRACT: The existing concepts on the distribution of electromagnetic waves in opaque and semiopaque crystals; particularly cited are penetration of two isonormal waves through any direction of anisotropic crystals, differing refraction indices and adsorption coefficients of the waves, and the generation of one cone by the intersecting refraction surfaces and of a similar cone by the intersecting absorption surfaces. The author derives mathematical expressions describing these cones exactly, whereas the expressions suggested by W. Voigt (Annalen der Physik, 27, 1002, 1908) are thought to be approximations. The expression

Card 1/4

Concerning Some Peculiarities in the Behavior of Refraction Indices and Absorption Coefficients of Opaque Crystals

75995
SOV/70-4-5-17/36

$$1/n_{\pm}^2 = a + b(\mathbf{d}'\mathbf{d}'' \pm \sqrt{\mathbf{d}'^2\mathbf{d}''^2}), \qquad (4)$$

defines refraction index n in terms of complex parameters a, b, and of $d' = [nc']$, $d'' = [nc'']$, in which c' and c" are the vectors that define the electric susceptibility as in

$$\varepsilon'^{-1} = a + b(\mathbf{c}'\mathbf{c}'' + \mathbf{c}''\mathbf{c}'). \qquad (2)$$

The condition under which the refraction indices of the two isonormal waves become equal is at

$$n_+ - n_- = i\delta_1, \qquad (5)$$

in which the difference of the complex refraction indices on the left hand side is an imaginary quantity unless

$$n_+ - n_- = \delta_2 = n_1^{(+)} - n_1^{(-)}$$

holds, where the right-hand member is the difference of the respective absorption coefficients and δ_2

Card 2/4

Concerning Some Peculiarities in the Behavior of Refraction Indices and Absorption Coefficients of Opaque Crystals

75995
SOV/70-4-5-17/36

always is a real quantity. Squaring the latter equation and substituting **n** by its expression in terms of the radius vector **r**, the author derives.

$$\frac{a\mathbf{r}^2 + b\,|\mathbf{r}\mathbf{c}'|\,|\mathbf{r}\mathbf{c}''| - \sqrt{a^2\mathbf{r}^4 + 2ab\mathbf{r}^2\,|\mathbf{r}\mathbf{c}'|\,|\mathbf{r}\mathbf{c}''| - b^2\,[|\mathbf{r}\mathbf{c}'|\,|\mathbf{r}\mathbf{c}''|]^2}}{a^2\mathbf{r}^4 + 2ab\mathbf{r}^2\,|\mathbf{r}\mathbf{c}'|\,|\mathbf{r}\mathbf{c}''| - b^2\,[|\mathbf{r}\mathbf{c}'|\,|\mathbf{r}\mathbf{c}''|]^2} = \pm\frac{\delta^2}{2\mathbf{r}^4}. \quad (9)$$

If the extracted imaginary part of the equation is 0, it will represent the equation of the cone of directions in which the refraction indices of the two waves coincide when the sign of δ^2 is —, or the absorption coefficients coincide when the sign is + . **r** occurs in the numerator in second power and in the denominator in 4th power. Exclusion of imaginary quantities in the denominator makes **r** of 6th power, and the elimination of irrationalities requires squaring twice, thus bringing r into 24th power. Consequently, the cones are termed of 24th order. Applying the equation to a number of orthorhombic (antimonite, etc.) monoclinic and triclinic opaque crystals, the author found that the cone order

Card 3/4

Concerning Some Peculiarities in the Behavior of Refraction Indices and Absorption Coefficients of Opaque Crystals

75995
SOV/70-4-5-17/36

may deviate from the theoretical one. F. I. Fedorov is acknowledged for guidance. There are 4 figures; 1 table; and 11 references, 6 German, 5 Soviet.

ASSOCIATION: Institute of Physics and Mathematics of the Academy of Sciences of the BSSR (Institut fiziki i matematiki AN BSSR)

SUBMITTED: May 25, 1959

Card 4/4

24.7100,24.3000

77107
SOV/70-4-6-8/31

AUTHOR: Goncharenko, A. M.

TITLE: Concerning the Approximate Theory on Optical Properties of Opaque Crystals

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 6, pp 849-854 (USSR)

ABSTRACT: The Maxwell equations:

$$\left.\begin{aligned} \varepsilon E &= -[nH], \\ H &= [nE]. \end{aligned}\right\} \qquad (1)$$

for plane-polarized electromagnetic waves in opaque crystals are hard to solve and usually are substituted by approximations applicable for media, the opacity and anisotropy of which are weak. Instead of substitutes, the author suggests the use of Maxwell equations supplemented with a few approximate quantities and rearranged. The refraction and absorption indices n_1 and n_2 can be determined according to:

Card 1/5

Concerning the Approximate Theory on
Optical Properties of Opaque Crystals

77107
SOV/70-4-6-8/31

$$\{\zeta + \alpha_2 (A_1 \cdot A_2 + A_2 \cdot A_1) + i\beta_2 (B_1 \cdot B_2) + B_2 \cdot B_1\} H = 0, \tag{9}$$

where

$$\zeta = \alpha_1 + i\beta_1 - \frac{1}{n^2} = \zeta_1 + i\zeta_2, \tag{10}$$

$$A_1 = [na_1], \quad A_2 = [na_2], \quad B_1 = [nb_1], \quad B_2 = [nb_2]. \tag{11}$$

unit vectors a_1, a_2 and b_1, b_2 represent refraction and absorption binormals (normals to the circular sections of the refraction and abscrption ellipsoids) respectively; α and β are refraction and absorption tensors which with subscripts 1, 2, 3 denote the respective real scalar parameters; H is magnetic force vector. The n_1 and n_2 determination is achieved by

Card 2/5

substituting p + iq for $\frac{1}{n^2}$ in Eq. 10 and by rearranging the result as:

$$\left.\begin{aligned} n_1^2 &= \frac{1}{2}\,\frac{\sqrt{p^2+q^2}+p}{p^2+q^2}, \\ n_2^2 &= \frac{1}{2}\,\frac{\sqrt{p^2+q^2}-p}{p^2+q^2}. \end{aligned}\right\} \qquad (13)$$

in which

$$\left.\begin{aligned} p &= \alpha_1 + \alpha_2 A_1 A_2 \pm \\ &\pm\sqrt{\frac{\sqrt{(\alpha_2^2 A_1^2 A_2^2 - \beta_2^2 B_1^2 B_2^2)^2 + 4\alpha_2^2\beta_2^2([A_1B_1][A_2B_2] - A_1B_1 \cdot A_2B_2)^2} + (\alpha_2^2 A_1^2 A_2^2 - \beta_2^2 B_1^2 B_2^2)}{2}}, \\ q &= \beta_1 + \beta_2 B_1 B_2 \pm \\ &\pm\sqrt{\frac{\sqrt{(\alpha_2^2 A_1^2 A_2^2 - \beta_2^2 B_1^2 B_2^2)^2 + 4\alpha_2^2\beta_1^2([A_1B_1][A_2B_2] - A_1B_1 \cdot A_2B_2)^2} - (\alpha_2^2 A_1^2 A_2^2 - \beta_2^2 B_1^2 B_2^2)}{2}}. \end{aligned}\right\} \qquad (17)$$

Concerning the Approximate Theory on
Optical Properties of Opaque Crystals

77107
SOV/70-4-6-8/31

Two more rearranged forms of Eq. 9:

$$\begin{gathered}\mathrm{H} \parallel (\zeta_1 + \alpha_2 A_1 A_2)\cdot[nA_1] + \alpha_2 A_1^2 \cdot [nA_2] + \\ + i(\zeta_2 [nA_1] + \beta_2 A_1 B_1 \cdot [nB_2] + \beta_2 A_1 B_2 \cdot [nB_1]).\end{gathered} \tag{18}$$

$$\begin{gathered}\mathrm{H} \parallel \zeta_1 [nB_1] + \alpha_2 A_1 B_1 \cdot [nA_2] + \alpha_2 A_2 B_1 \cdot [nA_1] + \\ + i(\zeta_2 + \beta_2 B_1 B_2)\cdot[nB_1] + \beta_2 B_1^2 \cdot [nB_2]).\end{gathered} \tag{19}$$

permit one to determine the polarization of electromagnetic waves whose normals n may be in any direction. The axes of the biaxial wave ellipsoid can be computed according to:

$$\left.\begin{aligned} a^2 &= \frac{1}{2}\left(\mathrm{H}_1^2 + \mathrm{H}_2^2 + \sqrt{(\mathrm{H}_1^2 + \mathrm{H}_2^2)^2 - 4[\mathrm{H}_1\mathrm{H}_2]^2}\right), \\ b^2 &= \frac{1}{2}\left(\mathrm{H}_1^2 + \mathrm{H}_2^2 - \sqrt{(\mathrm{H}_1^2 + \mathrm{H}_2^2)^2 - 4[\mathrm{H}_1\mathrm{H}_2]^2}\right), \end{aligned}\right\} \tag{20}$$

Card 4/5

Concerning the Approximate Theory on Optical Properties of Opaque Crystals

77107
SOV/70-4-6-8/31

where a and b are the major and minor semi-axes of the ellipsoid; H_1 and H_2 are real and imaginary portions of the magnetic force. The reduced varieties of the above equations are derived for special cases when (1) opacity is weak, (2) both the opacity and anisotropy are weak, (3) the opacity is very high. Prof. F. I. Fedorov is acknowledged for guidance. There are 9 references, 5 Soviet, 3 German, 1 Indian.

ASSOCIATION: Institute of Physics and Mathematics of the Academy of Sciences of the Belorussian SSR (Institut fiziki i matematiki AN BSSR)

SUBMITTED: March 22, 1959

Card 5/5

GONCHARENKO, A. M., Cand Phys-Math Sci -- (diss) "Research into the optical properties of absorbing crystals on the basis of an invariant method." Minsk, 1960. 11 pp; (Ministry of Higher, Secondary Specialist, and Professional Education Belorussian SSR, Belorussian State univ im V. I. Lenin); 180 copies; price not given; (KL, 22-60, 130)

GONCHARENKO, G.M., inzh.

Concerning the protection of large batteries of electric condensers. Izv. vys. ucheb. zav.; energ. 4 no.11:29-35 N '61. (MIRA 14:12)

1. Moskovskiy ordena Lenina energeticheskiy institut. Predstavlena kafedroy tekhniki vysokikh napryazheniy.
(Condensers (Electricity)) (Electric protection)

S/058/62/000/008/055/134
A061/A101

24 3950

AUTHOR: Goncharenko, A. M.

TITLE: On the linear polarization of light in absorbing crystals of lower syngony

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 3, abstract 8G21 ("Dokl. AN BSSR", 1961, v. 5, no. 12, 545 - 547)

√B

TEXT: An equation of the cone of linear polarization in absorbing crystals of lower syngony is derived in the general form. This equation is of third order and depends on the character and orientation of the optical crystal axes. The cases of rhombic, monoclinic, and triclinic syngonies are thoroughly examined separately.

P. Kard

[Abstracter's note: Complete translation]

Card 1/1

9,3700

S/250/62/006/005/003/007
1024/1224

AUTHORS: Sotskiy, B. A. and Goncharenko, A. M.

TITLE: Electromagnetic field of a plane-parralel layer in conditions of self-excitation

PERIODICAL: Akademiya nauk Belaruskay SSR. Doklady, v. 6, no. 5, 1962, 297-300

TEXT: This paper is a continuation of: A. M. Goncharenko and B. A. Sotskiy, DAN BSSR, 6, no 4, 1962. A system of equations is written for the normal and parellel components of electromagnetic fields, propagating inside and outside an active plane-parallel layer. These equations contain the refraction angle and dielectric constants. Expressions are given for the electric and magnetic fields inside the layer and also for the time and phase averaged energy density and Poynting vector. For the last two a definite dependence of the dielectric constant on the radiation density is assumed. An agreement is claimed between numerical values characterizing the system of rings actually observed on a screen (T. H. Maiman and others, Phys Rev 123, 1151, 1961) and those predicted by the present paper. There is one figure.

√ B

ASSOCIATION: Institute fiziki AN BSSR (Institute of Physics AS BSSR)

SUBMITTED: March 14, 1962

Card 1/1

GONCHARENKO, A.M.; SOTSKIY, B.A.

Condition of self-excitation in a plane-parallel layer. Dokl. AN BSSR 6 no.4:223-225 Ap '62. (MIRA 15:4)

1. Institut fiziki AN BSSR. Predstavleno akademikom AN BSSR B.I.Stepanovym.

(Optics, Physical)

SOTSKIY, B.A.; GONCHARENKO, A.M.

Electromagnetic field of a plane-parallel layer under conditions of self-excitation. Dokl. AN BSSR 6 no.5:297-300 My '62.
(MIRA 15:6)

1. Institut fiziki AN BSSR. Predstavleno akademikom AN BSSR B.I. Stepanovym.
(Electromagnetic waves)

GONCHARENKO, A.M.

Refraction and absorption ellipsoids for absorbing crystals.
Kristallografiia 7 no.1:133-134 Ja-F '62. (MIRA 15:2)

1. Institut fiziki AN BSSR.
(Crystallography, Mathematical)

GONCHARENKO, A.M.; SOTSKIY, B.A.; FEDOROV, F.I.

Self-excitation of a plane-parallel anisotropic layer. Kristallografiia 8 no.1:47-50 Ja-F'63 (MIRA 17:7)

1. Institut fiziki AN Belorusskoy SSR.

GONCHARENKO, A.M.

AID Nr. 993-3 19 June

SELF-EXCITATION CONDITIONS FOR A PLANE-PARALLEL CRYSTALLINE PLATE (USSR)

Sotskiy, B. A., and A. M. Goncharenko. Kristallografiya, v. 8, no. 2, Mar-Apr 1963, 278-280. S/070/63/008/002/012/017

The dynamic equilibrium of monochromatic plane waves inside and outside a plane-parallel anisotropic plate bounded by an opaque metallic layer on one surface and a semitransparent layer on the other is considered in the absence of external incident radiation. Such equilibrium can be established only in plates with a negative absorption coefficient. For the general case, eight waves described by eight equations, each having its own absorption

Card 1/2

AID Nr. [illegible]3-3 19 June

SELF-EXCITATION CONDITIONS (Cont.) S/070/63/008/002/012/017

factor and refractive index, must be considered. However, in this specific case the problem is reduced to two independent sets of four equations each describing the generation of ordinary and extraordinary waves in a plate cut from a uniaxial crystal of mean syngony perpendicular to the optical axis. Each set of equations is considered separately, and oscillation conditions are derived by setting the determinant of each set equal to zero. Conditions for the existence of non-zero solutions yield the oscillation conditions of extraordinary waves. It is noted that emission in different directions within the plate must be polarized differently. [BB]

Card 2/2

L 9879-63 EWT(1)/BDS/EEC(b)-2--AFFTC/ASD/
ESD-3/SSD--GG/IJP(C)
ACCESSION NR: AP3000788 S/0070/63/008/003/0471/0473

AUTHOR: Petrov, N. S.; Goncharenko, A. M.; Sotskiy, B. A. 61 60

TITLE: Oscillation of a plane parallel anisotropic layer in the presence of total reflection

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 471-473

TOPIC TAGS: oscillation, plane parallel layer, anisotropic medium, negative coefficient of absorption

ABSTRACT: Oscillation in a plane parallel anisotropic layer 21 in which electromagnetic waves are propagated obliquely to the layer's surfaces is analyzed within the framework of linear optics. Two cases are considered: 1) oscillation in the presence of total reflection, rather than oscillation in a layer with metal coatings on both sides, and 2) oscillation with total reflection taking place at a single interface only. It is shown that in the former case a stable oscillation regime cannot be attained for either the ordinary or the extraordinary waves without resorting to high energy densities.

Card 1/2

L 9879-63
ACCESSION NR: AP3000788

and nonlinear theory. However, in the latter case oscillation of both ordinary and extraordinary waves can be attained within the framework of linear optics by changing the Fresnel coefficient of absorption at one of the boundaries. Orig. art. has: 15 formulas.

ASSOCIATION: Institut fiziki AN BSSR (Institute of Physics AN BSSR)

SUBMITTED: 08Oct62 DATE ACQ: 21Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 003 OTHER: 000

Card 2/2

GONCHARENKO, A.M.; FEDOROV, F.I.

Optical properties of crystalline plates. Opt.i spektr. 14 no.1: 94-99 Ja'63. (MIRA 16:5)

(Crystal optics)

S/051/63/014/001/016/031
E032/E314

AUTHORS: Fedorov, F.I. and Goncharenko, A.M.

TITLE: Propagation of light along circular optic axes of absorbing crystals

PERIODICAL: Optika i spektroskopiya, v. 14, no. 1, 1963, 100 - 105

TEXT: A general theory of propagation of electromagnetic waves along circular optic axes of absorbing crystals, based on an invariant method, is described. General solutions are derived of the Maxwell equations for an arbitrary absorbing crystal, including refraction and reflection at normal incidence at an arbitrary absorbing crystal surface, and a plane-parallel plate cut from such a crystal with the circular axis perpendicular to the reflecting face. Explicit expressions are obtained for the wave amplitudes in each case. The present results include the analysis of A.P. Khapalyuk (Opt. i spektr. 12, 106, 1962) as a special case.

SUBMITTED: December 19, 1961

Card 1/1

STEPANOV, B.I.; GONCHARENKO, A.M.; IVANOV, A.P.; SAMSON, A.M.;
SOTSKIY, B.A.; KHAPALYUK, A.P.

Generation of radiation from an infinite plane-parallel layer.
Izv.AN SSSR.Ser.fiz. 27 no.4:460-465 Ap '63. (MIRA 16:4)
(Masers) (Electric resonators)

GONCHARENKO, A.M.

Eliminating the circulation loss developing in fractured rocks when drilling wells under complex conditions; a topic for discussion. Neft. khoz. 41 no.4:19-23 Ap '63.

(MIRA 17:10)

ACCESSION NR: AP4044254 S/0250/64/008/007/0438/0440

AUTHOR: Sotskiy, B. A.; Goncharenko, A. M.

TITLE: Diffraction of partially coherent light

SOURCE: AN BSSR. Doklady, v. 8, no. 7, 1964, 438-440

TOPIC TAGS: physical optics, dielectric resonator, light diffraction, partially coherent light

ABSTRACT: An attempt has previously been made to calculate the diffraction of partially coherent light at a narrow slit, given an exponentially decreasing coherence function. Since the implicit assumption that the latter satisfies the wave equation is not satisfied, the results obtained are doubtful. In the present paper, the calculation is made for a coherence function of the form $(\sin \frac{X}{\alpha})/\frac{X}{\alpha}$ where α is the coherence interval. The diffracted intensity found does not differ greatly from that for monochromatic light when $2a/\alpha$ is small, where $2a$ is the width of the slit. When this ratio is large, the divergence of the radiation is $\lambda/2\pi\alpha$, independent of the slit width, as confirmed by experiment. For dielectric resonators this angle will be several tens of minutes. It is not known how well the coherence function fits the case of a dielectric resonator; however, it satisfies the wave equation, decreases with increasing distance between the points con-

Card 1/2

ACCESSION NR: AP4044254

sidered and probably does not give results differing greatly from those given by other functions satisfying these criteria. "The author acknowledges the interest of Prof. B. I. Stepanov and B. B. Boyko in his work." Orig. art. has: 1 figure and 9 formulas.

ASSOCIATION: Institut fiziki AN BSSR (Physics Institute, AN BSSR)

SUBMITTED: 28Feb64 ENCL: 00

SUB CODE: OP NO REF SOV: 001 OTHER: 006

Card 2/2

[illegible] fiziki AN BSSR (Institute of Physics, AN BSSR)

[illegible]

[illegible] cylinder. It [illegible]

GONCHARENKO, A.M.; GRUM-GRZHIMAYLO, S.V.; FEDOROV, F.I.

Light absorption surfaces of crystals of various systems. Kristallografiia 9 no.4:589-598 Jl-Ag '64. (MIRA 17:11)

1. Institut fiziki AN BSSR i Institut kristallografii AN SSSR.

ACCESSION NR: AP4020966 S/0051/64/016/003/0513/0516

AUTHOR: Petrov, N. S.; Goncharenko, A. M.; Sotskiy, B. A.

TITLE: Concerning self-excitation in a plane-parallel slab in the presence of total reflection

SOURCE: Optika i spektroskopiya, v. 16, no. 3, 1964, 513-516

TOPIC TAGS: laser, laser oscillation, stimulated generation, self-excitation, laser slab, plane-parallel slab, reflection, laser slab reflection

ABSTRACT: Under the usual conditions of generation (laser oscillation) in a plane-parallel slab, energy is emitted through one or both faces (given a sufficient thickness of the metallic coating on the other); that is, under conditions in which part of the energy is lost due to absorption. This can be avoided by providing for complete reflection by bevelling at least one of the end faces to the angle of total reflection. Thus, the stimulated emission from a spherical specimen observed by C. B. Garret, W. Kaiser, and W. L. Bond (Phys.Rev.,124,1807,1961) may be explained by increase of the reflection coefficient at near total reflection angles. Accordingly, the present paper analyses the possibility of generation (self-excitation)

Card 1/2

ACCESSION NR: AP4020966

of electromagnetic waves in a plane-parallel slab under conditions of total reflection. The approach is solution of the Maxwell equations with the appropriate boundary conditions; an analogous problem was solved earlier by two of the authors (A. M.Goncharenko and B.A.Sotskiy, DAN BSSR, 6, 223, 297, 1962), and the expressions for the condition necessary for self-excitation are taken from those papers. By separation of the real and imaginary parts and introduction of the Fresnel reflection coefficients, the conditions for self-excitation in a plane-parallel slab are derived in the case of total reflection from both faces. Analysis of the expressions shows that self-excitation is impossible if the imaginary component of the dielectric constant (i.e., the negative absorption) is smaller than zero, that is, in the region of linear optics; however, the energy density in the layer may build up to the point where in the limit the medium becomes transparent and self-excitation becomes possible (but, of course, no radiation can be extracted without violating the condition for total reflection). The equations are also extended to the case of a slab with total reflection only at one face; in this case self-excitation (laser oscillation) becomes possible in the region of linear optics. The condition for generation is affected primarily by the value of the ordinary Fresnel reflection coefficient. "The authors are grateful to F.I.Fedorov and B.V.Bokut' for their interest in the work." Orig.art.has: 21 formulas and 2 figures.

Card 2/2

ACCESSION NR: AP4010757 S/0020/64/154/001/0091/0093

AUTHORS: Sotskiy, B. A.; Goncharenko, A. M.

TITLE: On the condition of electromagnetic waves generation in a double-layer crystal

SOURCE: AN SSSR. Doklady*, v. 154, no. 1, 1964, 91-93

TOPIC TAGS: photon generator, electromagnetic wave, crystal, uniaxial crystal, crystal self-excitation, laser, double-layer crystal

ABSTRACT: The previous work of the authors (Kristallograxiya 8, 47 1963) which dealt with an ideal homogeneous crystal layer is extended to a parallel plane crystalline plate consisting of two layers of equal thickness of uniaxial crystals with an arbitrarily oriented optical axis. This represents the simplest model of an actual crystal which has a nonuniformity of the refractive index and of the absorption coefficient. For the derivation of the conditions for generation (self-excitation), in the absence of external radiation, the Maxwell equations are solved with the boundary conditions at the three separation planes. The results show that the

Card 1/2

ACCESSION NR: AP4010757

conditions of generation in a double layer are considerably more complex than those in a uniform layer. Small deviations from uniformity have very little effect on the generation of the ordinary wave. The extraordinary wave is affected more. "The authors are grateful to Prof. F. I. Fedorov for a useful discussion of the results." Orig. art. has: 1 Figure and 12 Equations.

ASSOCIATION: Institut fiziki Akademii nauk SSSR (Physical Institute, Academy of Sciences,SSSR)

SUBMITTED: 01Apr63 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: PH NR REF SOV: 003 OTHER: 002

Card 2/2

L 45547-65 EWA(k)/FBD/EWG(r)/EWT(l)/EPA(s)-2/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(k)/

[illegible] AP5011001

1055

ABSTRACT: The authors point out first that neglect of reflection from the side

Card 2/2

L 46547-65

the [illegible] flow through the [illegible] results will be presented [illegible]
An analysis of the mathematical results will be presented [illegible] Orig. art. has: 13 formulas. [02]
[illegible] was presented by M. I. Stepanov.

L 1983-66 EWT(1)/EWA(h)
ACCESSION NR: AP5017693 UR/0250/65/009/006/0360/0363

35 B

AUTHORS: Goncharenko, A. M.; 44 Sotskiy, B. A. 44

TITLE: Contribution to the theory of a dielectric circular resonator. 25,44 II

SOURCE: AN BSSR. Doklady, v. 9, no. 6, 1965, 360-363

TOPIC TAGS: resonator, dielectric material, laser optics, laser pumping

ABSTRACT: This is a continuation of an earlier paper (DAN BSSR v. 9, no. 4, 1964), in which general formulas were derived for the energy of a finite resonator and for the energy losses. The present paper deals in greater detail with the properties of dielectric circular resonators in the case when the critical resonance condition can be satisfied for cylinders of finite length, and when the losses through the resonator ends are replenished (negative absorption or amplification). It is shown that with increasing radial propagation constant the total energy and the energy flux through the resonator ends de-

Card 1/2

L 1983-66

ACCESSION NR: AP5017693

crease rapidly, so that nonaxial modes begin to predominate. This explains, in particular, the occurrence of divergence in laser beams. It is deduced from the analysis that at minimum pump energy (threshold) only lower axial modes should appear, and that an increase in the pump energy is accompanied by the appearance of nonaxial modes, which must be suppressed to limit the beam divergence. 'The authors thank Professor B. I. Stepanov for a discussion of the results.' This report was presented by B. I. Stepanov. Orig. art. has: 6 formulas.

ASSOCIATION: Institut fiziki AN BSSR (Physics Institute, AN BSSR)

SUBMITTED: 05Jun64 ENCL: 00 SUB CODE: GP, OP

NR REF SOV: 003 OTHER: 005

Card 2/2

VOLOBUYEV, V.F.; ANKUDINOV, N.V.; GONCHARENKO, A.M.

Making 40Kh-type chromium steel using briquets made of ShKh-15 steel chips. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 18 no.7:3-4 Jl '65. (MIRA 18:9)

L 8106-66 EWA(k)/FBD/EWT(1)/EEC(k)-2/T/EWP(k)/EWA(m)-2/EWA(h) SCTB/IJP(c) WG

ACCESSION NR: AP5027672 UR/0051/65/019/005/0788/0791
621.375.9:535.001.1

58
54
B

AUTHOR: Sotskiy, B. A.44; Goncharenko, A. M.44

TITLE: Connection between the coherence of radiation and the number of modes in a quantum generator

SOURCE: Optika i spektroskopiya, v. 19, no. 5, 1965, 788-791

TOPIC TAGS: quantum generator, laser theory, 25,44 LASER RADIATION

ABSTRACT: On the basis of the classical theory of coherence (M. Born and E. Wolf, "Principles of Optics", NY, 1959), the degree of coherence of radiation in a quantum generator is evaluated, and its connection with the number of generated modes is determined. It is assumed that the radiation field of the quantum generator consists of N planar harmonic modes having different frequencies and directions of propagation but identical (unit) amplitudes; also the electromagnetic field is considered in a scalar approximation. It is found that under stationary conditions the radiation is entirely coherent when only one mode is generated. Both spatial and time coherences rapidly deteriorate as the number of generated modes increases. Under nonstationary conditions, the radiation field of a laser is partially coherent, the degree of coherence again depending on N. "The authors wish to thank

Card 1/2

Z

L 8106-66

ACCESSION NR: AP50[illegible]7672

1

B. I. Stepanov and I. I. Boyko for valuable discussions." Orig. art. has: 16 formulas. 44 44 [03]

ASSOCIATION: none

SUBMITTED: 13Jul64 ENCL: 00 SUB CODE: 20

NO REF SOV: 003 OTHER: 009 ATD PRESS: 4146

Card 2/2

L 2309-66 EWT(1)/EWA(h)
ACCESSION NR: AP5020733

UR/0057/65/035/008/1444/1446

AUTHOR: Goncharenko, A.M.

29
26
B

TITLE: Electromagnetic properties of a rectangular waveguide with anisotropic filling

25

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 8, 1965, 1444-1446

TOPIC TAGS: rectangular waveguide, waveguide propagation, dielectric constant, anisotropic medium

ABSTRACT: The author discusses the propagation of waves in a rectangular waveguide filled with a medium having an anisotropic dielectric tensor. One principal axis of the dielectric tensor is assumed to be parallel to the waveguide axis and the other two are assumed to be perpendicular to waveguide walls. Formulas are derived in a straightforward way for the normal modes and their propagation constants. It is shown that there are separate TM and TE modes if and only if the dielectric tensor is axially symmetric with its axis parallel to the waveguide axis. If the dielectric tensor is nearly axially symmetric one can speak of an ordinary quasi-TE wave and an extraordinary quasi-TM wave; these waves become in-

Card 1/2

L 2309-66 3

ACCESSION NR: AP5020733

creasingly hybridized as the dielectric tensor departs further from axial symmetry. The author asserts that the case in which the principal axes of the dielectric tensor are arbitrarily oriented can be treated in a similar way, but refrains from treating this case because of the complexity of the calculations. "The author is sincerely grateful to Professors F.I.Fedorov and B.A.Sotskiy for their interest in the work." Orig. art. has: 13 formulas.

ASSOCIATION: Institut fiziki AN BSSR, Minsk (Institute of Physics, AN BSSR)

SUBMITTED: 09Dec64

ENCL: 00

SUB CODE: EC, EM

NR REF SOV: 001

OTHER: 003

Card 2/2

GONCHARENKO, A.M.; SOTSKIY, B.A.

Theory of a dielectric resonator. Part 1. Dokl. AN BSSR 9 no. 4:224-227 Ap '65 (MIRA 19:1)

1. Institut fiziki AN BSSR. Submitted April 4, 1964.

GUSAK, N.A. [Husak, M.A.]; GONCHARENKO, A.M. [Hancharenka, A.M.]

Effect of anisotropy on the types of waves in a dielectric wave guide. Vestsi AN BSSR. Ser.fiz.-mat.nav. no.1:90-92 '65. (MIRA 19:1)

GONCHARENKO, A.M. [Hancharenka, A.M.]

Electromagnetic properties of a rectangular wave guide filled with a gyrotropic medium. Vestsi AN BSSR. Ser.fiz.-mat. nav. no.2:71-75 '65. (MIRA 19:1)

L 41275-66 EWT(1)

ACC NR: AP6019657 SOURCE CODE: UR/0368/66/004/006/0561/0563

AUTHOR: Goncharenko, A. M.; Gusak, N. A.

34
8

ORG: none

TITLE: Theory of the modes of anisotropic dielectric waveguides 25

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 6, 1966, 561-563

TOPIC TAGS: dielectric waveguide, waveguide element, waveguide propagation

ABSTRACT: The modes of an anisotropic dielectric waveguide when its element is made of a uniaxial crystal such that the optical axis of the crystal is parallel to the geometric axis of the waveguide are examined. It is shown that EH and HE modes are analogous to the modes of an isotropic dielectric waveguide. The transverse propagation constants of these modes are equal to the arithmetic mean values of the propagation constants of ordinary and extraordinary cylindrical waves. It is also pointed out that the anisotropy of the waveguide does not remove degeneration of the EH_{nm} and $HE_{n+2,m}$ modes. In the general case anisotropy will remove this degeneration. Orig. art. has: 11 formulas.

SUB CODE: 09/ SUBM DATE: 07Jul65/ ORIG REF: 005/ OTH REF: 001

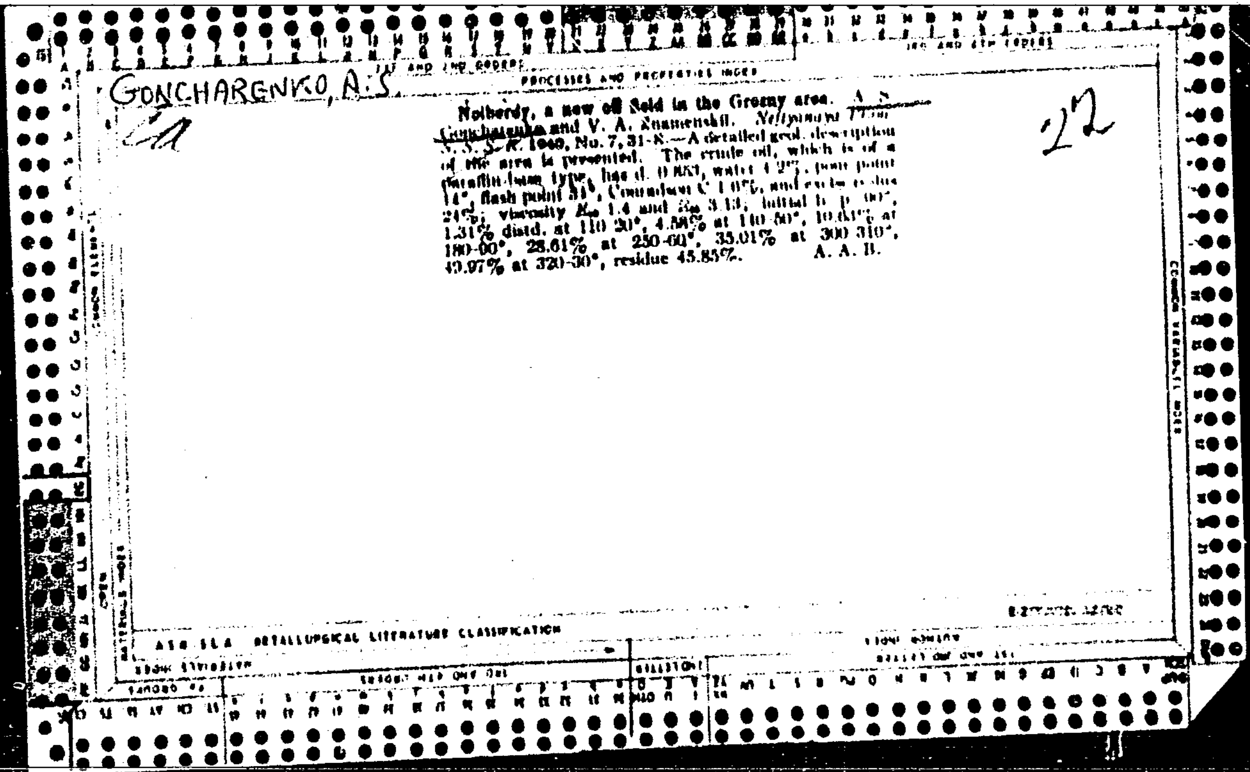
UDC: 621.372.8:621.315.61

Card 1/1

SASHENKOV, Mikhail Semenovich, kand. tekhn. nauk; SOROKOLETOV, Aleksandr Fedorovich; AFONASOV, Nikifor Ivanovich, dots.; UKOLOV, Mikhail Sergeyevich, inzh. st. nauchn. sotr.; GONCHARENKO, Andrey Nikiforovich, inzh. mlad. nauchn. sotr.; KHLYUSTIKOVA, Iraida Nikolyaevna, inzh., ml. nauchn. sotr.; GOLIK, Svetlana Andreyevna, inzh.

[Specialized transportation facilities for the haulage of building materials and elements] Spetsializirovannye transportnye sredstva dlia perevozki stroitel'nykh materialov i konstruktsii. Moskva, Stroiizdat, 1964. 57 p. (MIRA 18:5

1. Moscow. Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. 2. Rukovoditel' laboratorii transportnykh rabot otdela tr[illegible]uzochno-razgruzochnykh i skladskikh rabot Nauchno-issledovatel'skogo instituta organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu (for Sashenkov). 3. Glavnyy inzhener laboratorii transportnykh rabot otdela transportnykh, pogruzochno-razgruzochnykh i skladskikh rabot Nauchno-issledovatel'skogo instituta organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu (for Sorokoletov). 4. Laboratoriya transportnykh rabot otdela transportnykh, pogruzochno-razgruzochnykh i skladskikh rabot Nauchno-issledovatel'skogo instituta organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu (for Afonasov, Ukolov, Goncharenko, Khlyustikova).



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

GONCHARENKO, A.S.

21

22

Noiberdy, a new oil field in the Grozny area. A. S. ~~Goncharenko~~ and V. A. Znamenskii. *Neftyanoe Khoz.* ~~S.S.S.R.~~ 1949, No. 7, 31-8.—A detailed geol. description of the area is presented. The crude oil, which is of a paraffin-base type, has d. 0.881, water 4.2%, pour point 14°, flash point 31°, Conradson C 1.0%, and [illegible] residue 21%; viscosity E_{50} 1.4 and E_{20} 3.13; initial b. p. 60°, 1.31% distd. at 110-20°, 4.88% at 140-50°, 10.61% at 180-00°, 28.61% at 250-60°, 35.01% at 300-310°, 40.97% at 320-30°, residue 45.85%. A. A. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GONCHARENKO, A. S.

Goncharenko, A. S. — "Geological Structure and Hydrogeology of the Petropavlovsk Valley in Connection with the District Heating of the City of Groznyy." Min Higher Education USSR, Kazan' State U imeni V. I. Ul'yanov-Lenin, Kazan', 1955 (Dissertation for Degree of Candidate of Geologicomineralogical Sciences)

SO: Knizhnaya Letopis', No. 23, Moscow, June, 1955, pp. 87-104.

GONCHARENKO, A.S.; GONCHARENKO, E.A.

Diapir folds in the Peredovoy Range in eastern Ciscaucasia. Izv. vys. ucheb. zav.; neft' i gaz 3 no.9:3-8 '60. (MIRA 14:4)

1. Groznenskiy neftyanoy institut.
(Peredovoy range—Folds (Geology))

GONCHARENKO, A.S.; SUVOROVA, O.A.

Cathodic isolation of vanadium compounds. Zhur.prikl.khim. 33 no.4:846-850 Ap '60. (MIRA 13:9)

1. Kazakhskiy gosudarstvennyy pedagogicheskiy institut imeni Abaya.

(Vanadium compounds)

GONCHARENKO, A.S.; SUVOROVA, O.A.

Separation of vanadium from phosphorus by electrolysis. Zhur. prikl.khim. 33 no.7:1672-1674 Jl '60. (MIRA 13:7)
(Vanadium) (Phosphorus)

GONCHARENKO, A. S.

Cand Chem Sci - (diss) "Electrolytic precipitation of vanadium compounds from aqueous solutions." Alma-Ata, 1961. 15 pp; (Kazakhstan State Univ imeni S. M. Kirov); 120 copies; price not given; (KL, 6-61 sup, 197)

S/137/62/000/004/022/201
A006/A101

AUTHOR: Goncharenko, A. S.

TITLE: Separation of vanadium compounds out of aqueous solutions by the electrolysis method

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 20, abstract 4G121 ("Metallurg. i khim. prom-st' Kazakhstana. Nauchno-tekhn. sb.", 1961, no. 3, (13) 42-47)

TEXT: The author studied the possibility of extracting by electrolytical means V-compounds out of alkaline aqueous solutions. The inexpediency of using diaphragms is shown. On the cathode, salts are deposited containing approximately $K_2O \cdot nVO_2 \times mV_2O_5 \cdot qH_2O$. Addition of Na_2SO_4, K_2SO_4 or KCl, increase the rate of deposition of V-salts on the cathode and reduce power consumption. At a concentration in the solution of > 10 g/l V_2O_5 the simultaneous deposition of V compounds on both the cathode and anode is possible with a decreased power consumption. After extracting 60 - 80% V from the solution, it is expedient to use the electrolyte for leaching out new cinder portions. A new technological scheme is proposed for processing V-raw material: the cinders are leached out

Card 1/2

Separation of vanadium compounds ...

S/137/62/000/004/022/201
A006/A101

at 80 - 90°C for 1 hour with waste electrolyte at S : L = 1 : 4; the pulp is filtered off; from the solution V compounds are deposited by electrolysis by 60 - 80%; the electrolyte is re-used for lixivation and the V compounds are roasted at 135°C; a powder is then obtained containing about 80% V_2O_5. At an initial content in the electrolyte as high as 5.1 g/l V, electric power consumption is about 10 kw-h, and at 11.2 g/l V, it is about 2 kw-h per 1 kg V in the deposit. There are 21 references.

A. Tseydler

[Abstracter's note: Complete translation]

Card 2/2

GONCHARENKO, A.S.

Effect of the concentration of potassium and sodium chlorides and sulfates on the rate of vanadium compound electrodeposition. Zhur. prikl.khim. 34 no.7:1515-1519 Jl '61. (MIRA 14:7)
(Vanadium compounds) (Electrolysis)

GONCHARENKO, A.S.

Compound liberated at the anode in the electrolysis of alkali vanadate solutions. Zhur.prikl.khim. 34 no.11:2575-2576 N '61.
(MIRA 15:1)

(Alkali metal vanadates) (Electrolysis)

GONCHARENKO, A.S. (Alma-Ata)

Preparation of potassium chlorate by means of the electrolysis of potassium chloride solution. Khim. v shkole 17 no.3:67-68 My-Je '62. (MIRA 15:6)

(Potassium chlorate)

S/080/62/035/011/005/011
D287/D307

AUTHOR: Goncharenko, A.S.

TITLE: Anodic separation of vanadium compounds from aqueous vanadate solutions

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 11, 1962, 2449 - 2454

TEXT: Experiments were carried out on the anodic separation of $K_2V_6O_{16}.H_2O$ and, particularly, on the effect of the anodic current density and of sodium sulfate and sodium chloride additives on the anodic separation of vanadium from the solution. The electrolyte was prepared by dissolving V_2O_5 in KOH; electrolysis was carried out at room temperature (about 18°C) in a glass cell (without diaphragm) The anodic deposit was separated from the electrolyte, washed with cold water (10-12°C) and dried to constant weight at 100°C. It was then dissolved in 2N H_2SO_4 and analyzed for its V-content. Investigations on the effect of the anodic current density (D_a) showed

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Card 1/2

Anodic separation of vanadium ... S/080/62/035/011/005/011
D287/D307

that a decrease of D_a from 100 to 5 ma/Cm^2 results in a 5-7 fold decrease in current consumption during the separation of the same quantity of vanadium. Addition of up to 100 g/l of sodium sulfate or sodium chloride also decreased current consumption but slightly lower separation of vanadium compounds was observed when the electrolyte contained 150 g/l of sodium chloride; the separation is decreased by a factor of 2 (as compared to solutions not containing additives) when sodium sulfate is added to the electrolyte in the above quantities. The pH of the solution is decreased to 6-7 when dry potassium bisulfate is added; this also decreases current consumption. There are 5 tables.

√

SUBMITTED: July 13, 1961

Card 2/2

TSLAF, N.Z. uchitel'; GONCHARENKO, A.S. (Alma-Ata); GAPONENKO, I.M. (Novozybkov); SHEVCHENKO, T.T., uchitel'; PASHAYEV, E., uchitel' khimii; FEDYAKIN, M.V., (Omsk)

Editor's mail. Khim. v shkole 18 no.1:81-83 Ja-F '63.
(MIRA 16:4)

1. Srednyaya shkola No.5, Moskva (for TSlaf). 2. Srednyaya shkola No.1, g. Bolekhov, UkrSSR (for Shevchenko). 3. Kurkenskaya shkola Dagestanskoy ASSR (for Pashayev).
(Chemistry--Experiments) (Chemical apparatus)

GONCHARENKO, A.S.

Effect of certain factors on the electrodeposition of molybdenum compounds from aqueous solutions. TSvet. met. 36 no.10:60-63 O '63. (MIRA 16:12)

GONCHARENKO, A.S.; GONCHARENKO, E.A.

Concerning certain phenomena related to the development of diapiric structures in the Chechen-Ingush A.S.S.R. Izv. vys. ucheb. zav.; neft' i gaz 7 no.12:11-12 '64. (MIRA 18:2)

1. Groznenskiy neftyanoy institut.

GONCHARENKO, A.S., inzh.; KURZANOV, A.N., inzh.; PUDENKO, Yu.N., kand. tekhn. nauk; SOVALOV, S.A., kand. tekhn. nauk

Determination of optimum operating modes of electric power systems. Elektrichestvo no.8:75-87 Ag '64.

(MIRA 17:11)

L [illegible]-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

[illegible] water, electrolytic potassium perrhenate dissociation

ABSTRACT: The composition and some properties of the compound precipitated [illegible]

1/5 upon heating from 25 to 50 C. Orig. art. has: [illegible]

OTHER: 001

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Study of the cathodic deposit formed in the electrolysis of molybdate aqueous solutions. Zhur. prikl. khim. 37 no. 4: 915-916 Ap '64. (MIRA 17:5)

End

#159